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ABSTRACT

Much of what has been written about improving lecturing is summarized, and strengths and weaknesses of this approach are identified. Lecturing is defined as teaching by the spoken word with emphasis on the teacher talking and the student listening. Instructional goals that are met by lecturing include: communicating the intrinsic interest of the subject matter; covering material not otherwise available; organizing material in a special way; conveying large amounts of information; communicating to many listeners at the same time; modeling how professionals in a particular discipline approach a question or problem; permitting maximum teacher control; minimizing threat to the student; and emphasizing learning by listening. Disadvantages include: the lack of feedback; student passiveness; maintaining attention; the tendency to forget the lecture material quickly; the underlying assumption that all students learn at the same pace and level of understanding; inappropriateness of lectures to higher levels of learning and to complex, detailed, or abstract material; the need for the lecturer to be an effective speaker; and the emphasis on learning by listening. Recommendations are offered for preparation and organization of the lecture, presentation and clarity, stimulation and interest, and feedback and interaction. (SW)

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Improving Lectures

by

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"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
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"Given the recent invention of the printing press, why do college professors continue to lecture so much?"
Anonymous

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The question is not trivial. The lecture approach may be the most widely used teaching approach in U.S. higher education. Looking at data from 6307 classes that used IDEA in the late 1970s, 24% were listed as "Lecture," 27% as "Lecture and Discussion," and 20% as "Lecture with Lab."

There are faculty who are convinced that lecturing is the most appropriate teaching approach in almost every case. There are others who are equally convinced that lecturing is almost never appropriate. The position of this paper is that it is impossible to decide upon an effective teaching approach without first deciding upon your instructional goals. Lecturing is very appropriate for some goals, and very inappropriate for others.

Every reader undoubtedly has an idea of what is meant by an "lecture," and dictionary definitions do not stray much from traditional light: lecture—an exposition on a given subject delivered before an audience or class for the purpose of instruction; or a method of teaching by discourse as opposed to conversation or seminar. Etomologically, to lecture means to read. In the medieval universities the professor did read from his notes because those were the only books available.

Unless otherwise stated in this paper, "lecture" will focus on teaching by the spoken word with emphasis on one-way communication: the teacher talks, and (hopefully) the students listen, recognizing that most courses listed as lecture in college catalogs involve some two-way communication, question and answer and the like, a practice we heartily approve.

Strengths of the Lecture Approach

The obvious answer to the question of why we continue to lecture so much is that lecturing continues to be useful in achieving a number of instructional goals.

Walker and McKeachie (1967) argue that the lecture approach had two unique strengths: it can communicate the intrinsic interest of the subject matter, and it can present the newest developments. Other authors have listed other goals which, although they may not be unique to lecturing, are well served by that approach.

1. Lectures can communicate the **intrinsic interest** of the subject matter. Like live theatre, lectures can convey the speaker's enthusiasm in a way that no book or other media can. Enthusiasm stimulates interest and interested, stimulated people tend to learn more.

2. Lectures can cover material **not otherwise available**. This includes original research or recent developments which may only be available from papers or articles not yet included in textbooks.

3. Lectures can **organize material in a special way**. Lectures may be a faster, simpler method of presenting materials fitted to the needs or interests of a particular audience.

4. Lectures can convey large amounts of **information**. Lectures are probably most often used to cover facts, generalizations, and the like. This was the original purpose of the lecture before the invention of the printing press. Lectures continue to be useful to convey information that is not available in print. When the material is otherwise available (e.g., in textbooks or programmed texts), you should consider whether lecturing on the material is desirable. It very well may be if, for example, the students are not motivated enough to study the material on their own, or they lack the required reading skills.

5. Lectures can communicate to **many listeners** at the same time. With the proper audiovisual support, a skilled lecturer can communicate effectively with a few hundred (or even a few thousand) listeners. (Unskilled lecturers should not try to lecture to groups of any size.)

6. Lectures can **model** how professionals in a particular discipline approach a question or problem. This modeling behavior is one of the major characteristics of the instructor-centered teacher described by Axelrod (1976).

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The audience can watch firsthand as the lecturer "thinks" like professionals in the field.

7. Lectures permit **maximum teacher control**. From the teachers' point of view this can be an advantage. The instructor chooses what material to cover, whether to answer questions, etc.

8. Lectures present **minimum threat to the student**. Students are not required to do anything. From the students' point of view this may be an advantage.

9. Lectures emphasize **learning by listening**. This is an advantage for students who learn well the way which is increasingly the case for students raised on television viewing.

Weaknesses of the Lecture Approach

The lecture approach has a number of strengths, unfortunately, it also has a number of weaknesses. Both must be taken into consideration when you are deciding whether giving a lecture is appropriate for a particular part of your course.

1. Lectures **lack feedback** to the instructor about the students' learning. "... in the long run, it is what the learner does rather than what the teacher does that really counts in teaching." (Dressel & Marcus, 1982, p. xix.) The major drawback of a strict lecture approach is that it does **not** provide the lecturer with any systematic information about whether and what the students are learning or not learning. Granted, there are a lot of nonverbal cues available if you look around.

2. In lectures, the **students are passive**, at least they are more passive than the lecturer. The more active the learner, the more learning is likely to take place.

3. Students' **attention wanes** quickly, in 15 or 25 minutes according to studies (Bligh, 1972).

4. Information learned in lectures tends to be **forgotten quickly**. This general statement depends considerably on how passive the students are. Students who simply listen to a lecture will tend to forget the material more quickly than students who listen and take notes, who in turn will remember less than students who take notes and are involved in some kind of question/answer session, etc. The more active the student, and the more senses, involved in the learning, the more he or she is likely to remember more material, and for a longer time.

5. Lectures presume that all students are learning at the **same pace and level of understanding**. Of course, this is hardly ever true. Unlike written passages that can be reread, or tapes that can be rewound, lectures proceed at a pace determined by the lecturer, not the individual student.

6. Lectures are **not well suited to higher levels of learning**: application, analysis, synthesis, influencing attitudes or values, developing motor skills. Lecturing is best suited to the lower levels of knowledge and understanding. If you want students to think critically or to write well, you need to do something other than lecture.

7. Lectures are **not well suited to complex, detailed, or abstract material**. The more difficult the material becomes, the more individual differences among the students are going to influence the pace and level of the students' learning. Therefore, self-paced and/or two-way communication teaching approaches become preferable to lecturing.

8. Lectures require an **effective speaker**. The lecturer must be loud enough to be heard, and also must vary pitch, tone of voice, and pace of delivery. Lecturers must be verbally fluent. These skills are not typically stressed in Ph.D. programs, the terminal degree for college teachers.

9. Lectures emphasize **learning by listening**, which is a disadvantage for students who prefer to learn by reading, or by doing, or some other mode.

Recommendations

This part attempts to summarize the recommendations about improving lectures made by several of the authors listed in the Further Readings section at the end of this paper. Citations will only be given where a specific author has something to recommend not included by other authors.

Preparation and Organization

These recommendations concern what should be done when the lecture is being planned, before you enter the classroom.

1. **Fit lecture to your audience**. Try to make the lecture relevant to your audience and, therefore, more interesting. This means that you will have to gather some information about your listeners beforehand.

2. **Select topic**. You will never be able to cover everything. Selecting your topic will determine the focus of your lecture and provide a context within which you make other decisions.

3. **Prepare an outline**. Some people suggest five to nine major points. If you attempt to cover too much, your audience will actually learn and also remember less. The object of a lecture is not just to cover the material, but to have the listeners learn.

4. **Organize your points**. This can be done in a number of ways, for example, chronologically, causally, in ascending or descending order, spatially, or by presenting a problem and then possible solutions. (See Day, 1980, for some alternative ways to organize your lecture notes.)

5. **Decide upon minor points**, or the points you wish to include under each major point.

6. **Select examples**. Almost all writers agree that illustrations, etc., help people both to understand and to remember.

7. **Present more than one side** of an issue. You must do this if you wish to convince your listeners of the validity of a given position—if that is one of your purposes—unless your audience is completely naive and incapable of thinking of any counter arguments. You should do it simply to help them understand various implications of an issue.

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Presentation and Clarity

This section and the next concern two different aspects of lecturing while you are actually in the classroom.

8. **Speak clearly and loud enough to be heard.** Seems obvious, but I suspect that we have all sinned against this prescription. Perhaps in the very first class you should suggest that people signal you if they cannot hear (e.g., cup a hand behind their ear).

9. **Avoid distracting mannerisms,** verbal tics like "ah" or "you know," straightening your notes or tie or beads.

10. **Provide an introduction.** Begin with a concise statement, something that will preview the lecture. Give the listeners a set or frame of reference for the remainder of your presentation. Refer to previous lectures. Attract and focus their attention.

11. **Present an outline.** Write it on the chalkboard, or use an overhead transparency, or a handout. Then be sure that you refer to it as you move from point to point in your lecture.

12. **Emphasize principles and generalizations.** Research suggests that these are what people really remember—and they are probably what you really want to teach.

13. **Repeat your points** in two or three different ways. Your listeners may not have heard it the first time, or understood it, or had time to write it down. Include examples or concrete ideas. These help both understanding and remembering. Use short sentences.

14. **Stress important points.** This can be done by how you say it. It can also be done explicitly (e.g., "Write this down!" "This is important." "This will be on the test." "If you are modeling thinking, point out the thought processes as you go along.

15. **Pause.** Give your listeners time to think—and to write.

Stimulation and Interest

The previous section made some recommendations that dealt with cognitive aspects of your classroom presentation; this section deals with affective aspects.

16. **Use effective speech techniques.** Talk, do not read your lecture. Vary your inflection, gestures, position, pace of lecture, etc.

17. **Be enthusiastic.** If you do not think the material is worth learning, why should the students? If you do think so, communicate that.

18. **Start with a question, problem, or controversy.** Very early in the lecture you need something that will catch the listeners' attention, something to stir their interest. There is nothing wrong with being dramatic as long as you also have content. No matter how profound your content, the students won't learn anything from you if they are half asleep.

19. **Be relevant.** Use materials and examples that the students can relate to, things from their previous learning or experience, things from "real life."

20. **Use AV.** Models, films, recordings, etc., make a lecture more vivid and immediate; they also provide variety. Demonstrations and experiments serve the same purpose.

21. **Use humor.** Almost every writer agrees that a certain amount of humor or personal anecdotes enhances a lecture. There are two cautions: first, the humor should not be at the expense of the students or offend the reasonable sensibilities of any group; second, avoid egotrips.

22. **Provide change.** Research suggests that most people's attention wanes after 15-25 minutes. I suggest that you introduce some kind of change about every 15 minutes. This does not mean ending your lecturing. It could simply be stopping for questions, or putting a transparency on the overhead, or moving to a different part of the room, but do something different.

Feedback and Interaction

Strictly speaking this is not part of a lecture defined as one-way communication. But none of the writers recommend that kind of lecture and very, very few college lecture courses are that restricted.

23. **Look at your listeners.** Most audiences provide a multitude of nonverbal clues about whether they are paying attention, whether they understand, and whether they agree.

24. **Solicit questions.** Even if all you do is occasionally pause, look around, and ask if there are any questions, you will have significantly added to the effectiveness of your lecture. It will give you some feedback from the students.

25. **Use discussion techniques.** There are a number of group techniques that can be used, even with hundreds of listeners, to increase their involvement. Several years ago some institutions had large lecture halls wired so that the instructor could put a multiple-choice question on the screen and the students could punch in their answers. The same thing can be accomplished by giving the students sets of five different colored index cards to hold up for their answers: red for option "1," yellow for "2," etc. You can call on a student who chose the correct answer (color) and have him or her explain why, or call on a student who chose an alternative that contained a common misconception. Interactions like this achieve two things: first, they actively involve the students' thinking about the material; and second, they give you feedback about what the students are learning.

26. **Use praise.** In your give-and-take with students, make positive comments when they are warranted; doing so increases learning.

27. **Use a lecture committee.** This is something McKeachie (1978) uses in large general psychology classes. Basically, it is a committee of students which meets with the instructor periodically to provide student feedback about how the course is progressing and to react to ideas for future classes.

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Conclusion

This paper has attempted to summarize much of what has been written about improving lecturing. Readers should be aware that, although there are empirical data supporting some of the recommendations made in this paper, most of the research is such that it would **not** compel belief. No case is being made that you **must** do these things to lecture effectively. Rather, these are some suggestions you might consider. If they are of help, fine; if not, try something else.

Lecturing is appropriate for many of the instructional goals of college-level classes. Lecturing is a craft; that is, a learnable skill. These suggestions will not ensure greatness, but for about 99% of us, they are steps in the right direction.

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Further Readings

All of the readings included in this list are recommended. However, as a help to the reader, there are two asterisks (**) following the reading recommended as first choice, and (*) for second choices.

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